formation or drying. The present invention is directed to, for example, a method for treating orthopedic defects comprising contacting an orthopedic defect with a defect healing amount of near equilibrium dried sol-gel bioactive glass. Near-equilibrium drying is drying under conditions near the two phase boundaries in the phase diagram at a temperature and pressure sufficient to yield to a bioactive glass with large pore structure i.e. a pore structure sufficient to yield a bioactive glass. The use of near-equilibrium drying in place of or in addition to drying under drying conditions provides for larger average pore size in the final composition and a higher rate of resorption. It is believed that near equilibrium drying reduces capillary force inside the pore structure of the gel which results in large pore size.

Turning now to the art rejection of record, it would not have been obvious to one of ordinary skill in the art to use near equilibrium dried sol gel bioactive glass in treating orthopedic defects. In contrast, Hench et al., is directed to laser dye impregnated silica sol-gel monoliths. The dye laser is prepared by immersing a highly porous consolidated silica sol-gel monolith in a solution of at least one laser dye and at least one solvent until the solution enters the pores of the monolith to a significant degree to form an impregnated silica sol-gel monolith, and then drying the impregnated silica sol-gel monolith to vaporize substantially all the solvent present within the pores of the monolith. Hench et al., does not discuss or address near-equilibrium dried bioactive glass or the use of such near-equilibrium dried bioactive glasses in treating orthopedic defects. At best, Hench et al., describes manipulation of the time or temperature, or both, of the drying, aging, and the stabilization steps to control the microstructure of a monolith. However, Hench et al., says nothing about a near-equilibrium drying step or that a near equilibrium drying step would improve pore structure, bioactivity or resorbability and treatment of the orthopedic condition.

In view of the foregoing, Applicants believe they have responded to all matters raised in the above referenced Office Action and that the application is now in condition for allowance. Therefore, Applicants respectfully request withdrawal of the

outstanding rejection and solicit a favorable action at an early date. If the Examiner has any questions concerning this Application or this Reply and Amendment, he is invited to contact the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By Allen R. Baum

Allen R. Baum
Registration No. 36,086

699 Prince Street
Alexandria, Virginia 22313
(919) 941-9240

Dated: November 2, 1998

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on 11-2-98
Date

Donnie J. Dietrich
(Typed or printed name of person signing the certificate)

Donnie J. Dietrich
(Signature of person signing the certificate)

November 2, 1998
(Date of Signature)